

Fig. 2

Priority Level

Max. time for continuous transfer

1

600 seconds

2

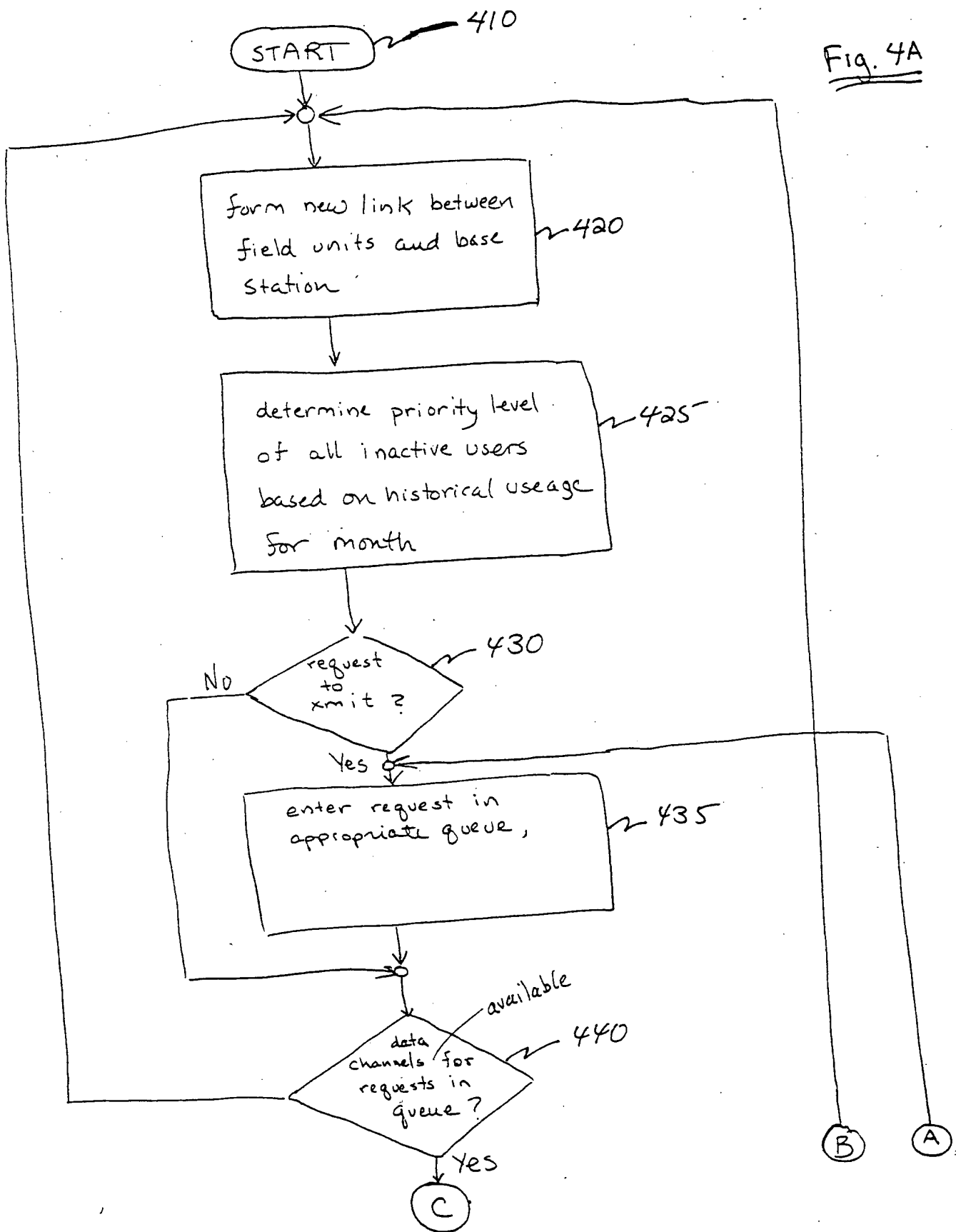
120 seconds

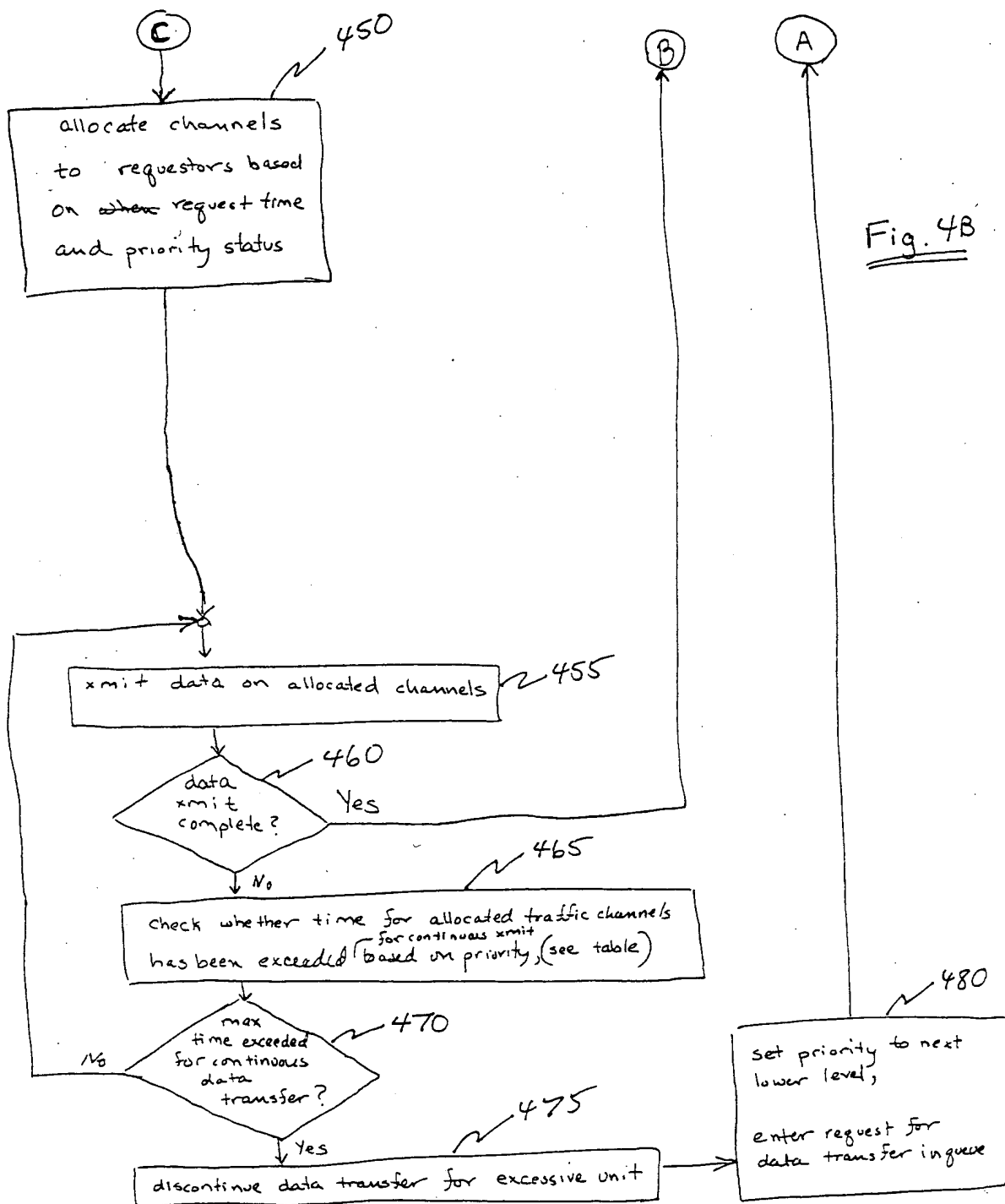
3

30 seconds

Fig. 3

Fig. 4A





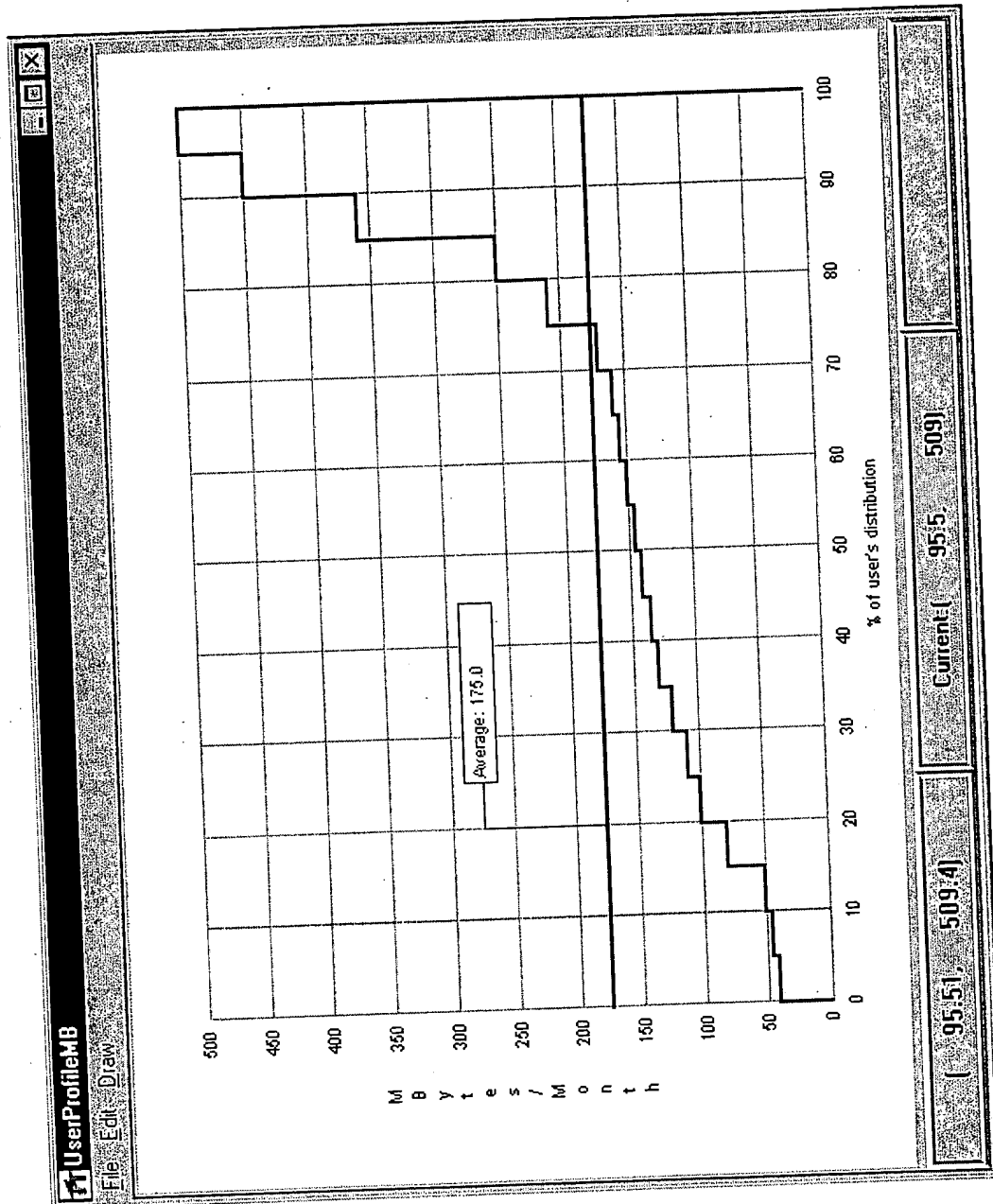


FIG. 5

| Application | Unit of Work | Estimated units per month (during peak load time, given an acceptable speed) | Unit size in Kilobytes | Monthly volumes (Megabytes during peak load time) | Acceptable speed (kpbs - Forward) | Acceptable Speed (kps - Reverse) | Theoretical Response time for unit (seconds) |
|---|------------------------|--|------------------------|---|--------------------------------------|-------------------------------------|--|
| Short Messages | Message | 100 | 0.1 | 0.01 | 14 | 14 | 0.06 |
| WAP and short e-mail | Message | 200 | 0.2 | 0.04 | 14 | 14 | 0.11 |
| e-mail | Letter | 200 | 1 | 0.20 | 28 | 28 | 0.29 |
| e-mail with attachments (Send&Receive) | Letter | 50 | 200 | 10.0 | 128 | 128 | 12.50 |
| Web Browsing (articles, text information, etc.) | Page | 300 | 20 | 6.0 | 128 | 28 | 1.25 |
| Web Browsing (e-bay, news, searching products, etc.) | Page | 800 | 50 | 40.0 | 256 | 28 | 1.56 |
| Web Downloads (programs, Applications) | Program | 4 | 5000 | 20.0 | 384 | 56 | 104.17 |
| Distant Learning | Lesson | 4 | 3000 | 12.0 | 256 | 128 | N/A |
| MP3 downloads and sharing | Song | 8 | 4000 | 32.0 | 384 | 384 | 83.33 |
| Internet radio | Minute of listening | 200 | 480 | 96.0 | 64 | 28 | N/A |
| Videoconferencing | Minute of session | 60 | 2880 | 172.8 | 384 | 384 | N/A |

FIG. 6

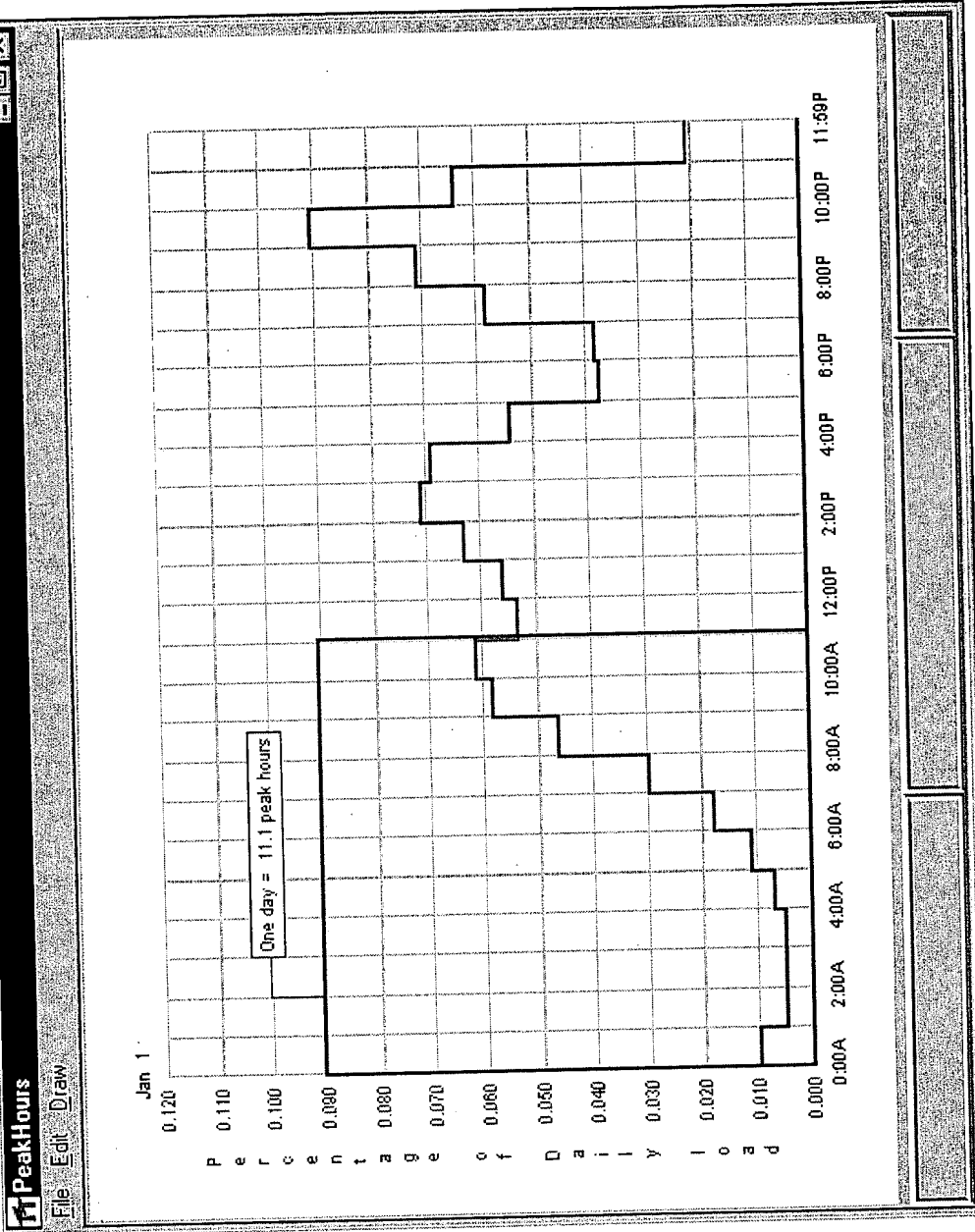


FIG. 7

Peak usage graph

Quality Of Service Estimator

175 Average

Main Impatience Factor User Distribution Peak Hour Load

| | | | |
|------------------------|------|---|-----|
| Page Size (Kilo Bytes) | 65 | N. of Subscribers | 75 |
| Network R.T. (sec) | 0.7 | Initial Allotment (MBy) | 10 |
| Pipe Size (Mbps) | 0.4 | End-of-Month Allotment | 170 |
| Pipe Efficiency (%) | 0.55 | Sessions Per Day | 1 |
| Max Avg Speed per S | 168 | <input type="checkbox"/> Hash ISP Birthdays | |

FIG-8

Example for User # 52

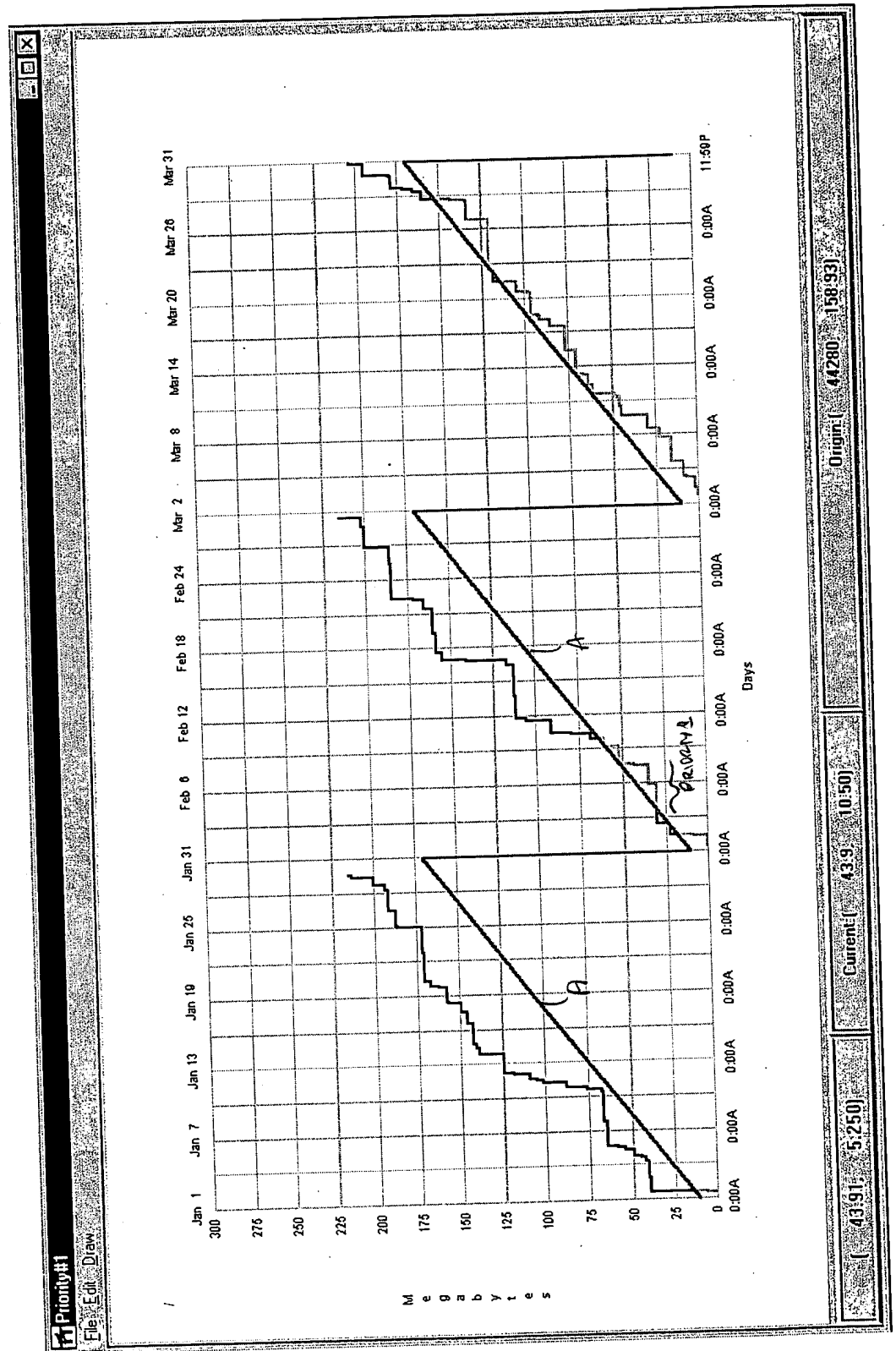
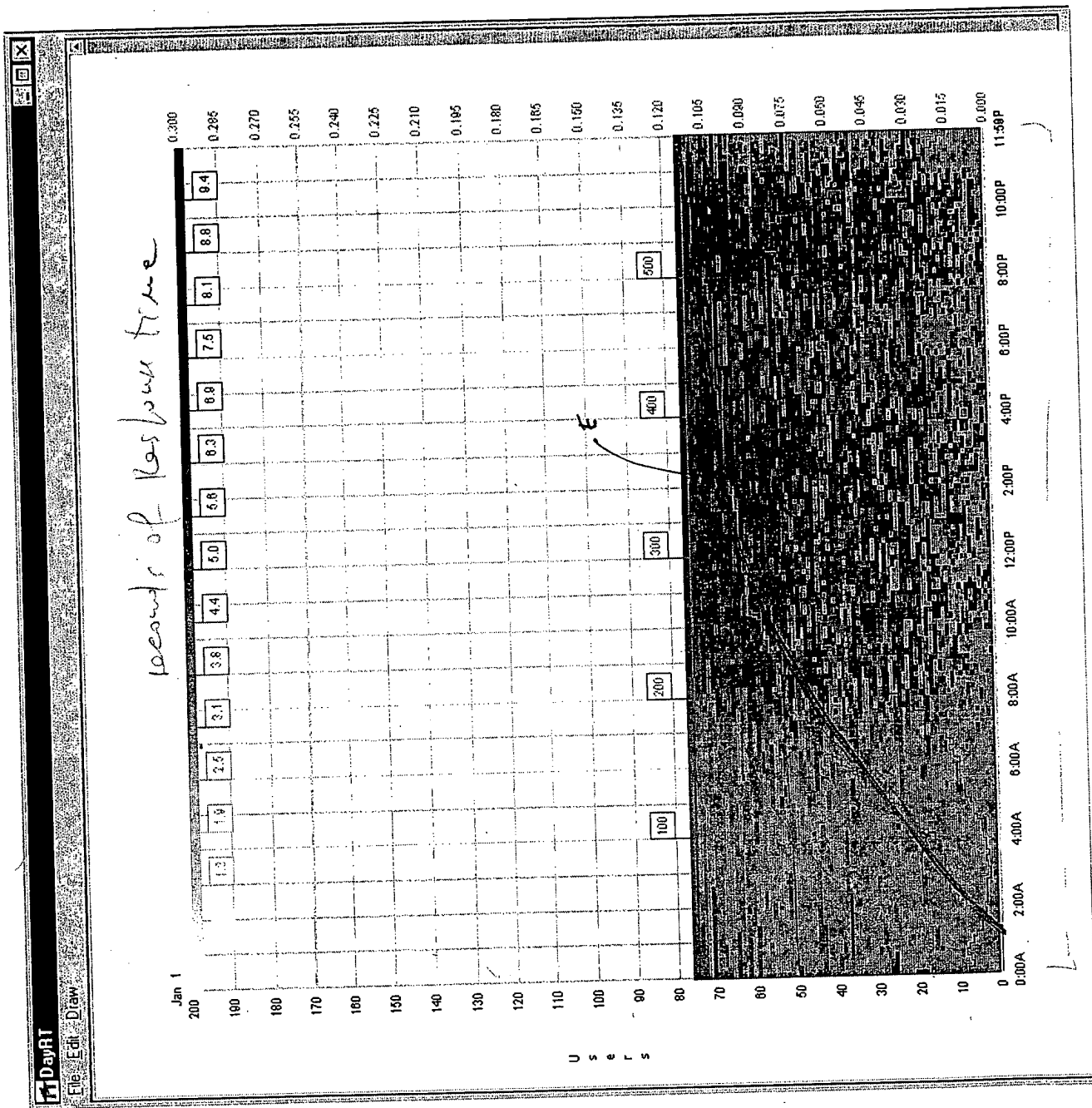


FIG-9



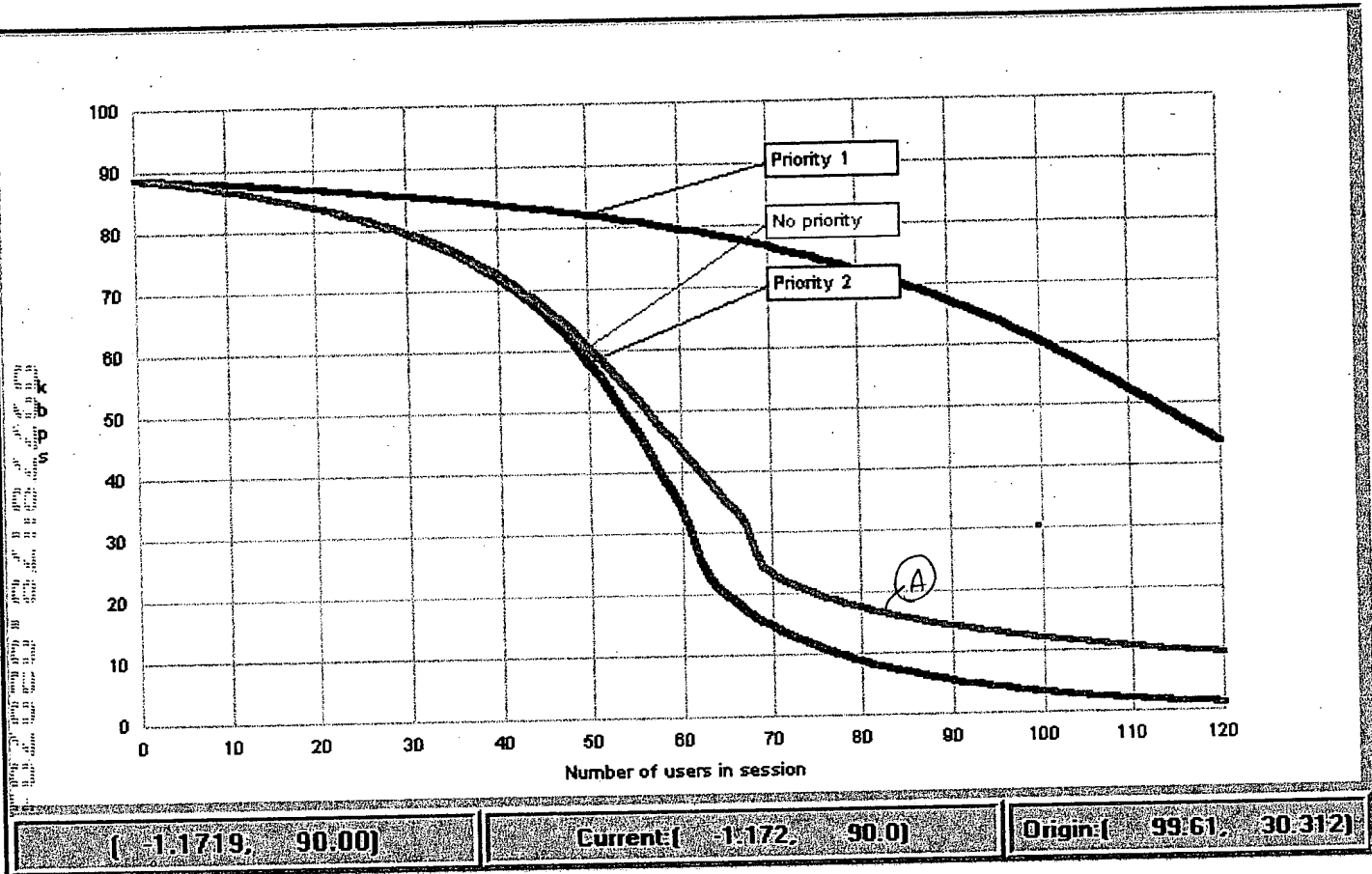


Fig. 11